WHAT IS CLAIMED IS:

1.   A method for controllably refilling a fluid ejector having a refillable container usable to contain fluid, the fluid ejector ejecting fluid from the refillable container in response to ejection data contained in an ejection job, the method comprising:

determining a first number of fluid ejection events remaining in the refillable container until the refillable container is to be refilled;

determining a second number of fluid ejection events needed to complete the ejection job; and

refilling the refillable container if either a first condition or a second condition is satisfied, wherein:

the first condition is satisfied when the determined second number of fluid ejection events is greater than the determined first number of fluid ejection events, and

the second condition is satisfied when the first number of fluid ejection events is at most zero.

2.   The method according to claim 1, wherein refilling the refillable container comprises delaying refilling the refillable container if the first condition is satisfied, until the second condition is satisfied when the second number of fluid ejection events is greater than a third number of fluid ejector events that are available after refilling the refillable container, and is less than or equal to a sum of the first number of fluid ejection events and the third number of fluid ejection events.

3.   The method according to claim 1, wherein determining the first number of fluid ejection events comprises initializing a reserve capacity count.

4.   The method according to claim 3, wherein determining the first number of fluid ejection events further comprises updating the reserve capacity count in response to a specific amount of fluid being ejected from the container.

5.   The method according to claim 1, wherein determining the first number of fluid ejection events comprises comparing a fluid reserve capacity to an indicated fluid level.

6.   The method according to claim 5, wherein comparing the fluid reserve capacity to the indicated fluid level comprises comparing the fluid reserve capacity to a full level.

7.   The method according to claim 5, wherein comparing the fluid reserve capacity to the indicated fluid level comprises comparing the fluid reserve capacity to a refill threshold level.

8.   The method according to claim 1, wherein determining the first number of fluid ejection events bases each fluid ejection event on a single ejection from the fluid ejector.

9.   The method according to claim 1, wherein determining the first number of fluid ejection events comprises bases each fluid ejection event on a particular number of single ejections from the fluid ejector.

10.   The method according to claim 1, wherein refilling the refillable container comprises:

determining if

$$(n-1) \, FF + FR < FN \le n \, FF,$$

where

FF is a filled reservoir amount of fluid;

FR is a current reservoir amount of fluid;

FN is an estimated amount of fluid needed to complete the ejection job;

n is an integer greater than zero;

if the equation is satisfied, delaying refilling the reservoir until both the first and second condition are satisfied; and

if the equation is not satisfied, refilling the reservoir if the first condition is satisfied.

11.   A fluid refill control system of a fluid ejector having a refillable reservoir usable to contain fluid comprising:

a fluid ejection amount determining circuit, routine or application that determines an expended quantity of fluid released from the container in response to an occurrence of a number of fluid ejection events;

a fluid reserve determining circuit, routine or application that determines a fluid reserve capacity and a fluid job requirement; and

a refill condition determining circuit, routine or application that determines that the container is to be refilled upon at least one of a first condition where the fluid job requirement exceeds the fluid reserve capacity and a second

condition, where the fluid reserve capacity is below a refill threshold, has been satisfied.

12.   The system according to claim 11, further comprising:

a count initializing circuit, routine or application that initializes at least one of an ejection event count and a reserve capacity count; and

a count incrementing circuit, routine or application that adjusts at least one of the ejection event count and the reserve capacity count in response to a specific amount of fluid being ejected from the container.

13.   The system according to claim 11, wherein the refill condition determining circuit, routine or application further determines if

$$(n-1) \, FF + FR < FN \leq n \, FF,$$

where

FF is a filled reservoir amount of fluid;

FR is a current reservoir amount of fluid;

FN is an estimated amount of fluid needed to complete the ejection job;

n is an integer greater than zero;

if the equation is satisfied, delaying refilling the reservoir until both the first and second condition are satisfied; and

if the equation is not satisfied, refilling the reservoir if the first condition is satisfied.

14.   The system according to claim 11, further comprising:

a fluid level indicating circuit, routine or application that is usable with at least one fluid level indicator to determine at least one fluid level in the container.

15.   The system according to claim 11, wherein the fluid reserve determining circuit, routine or application comprises:

a reserve capacity determining circuit, routine or application that determines a fluid reserve capacity in the container based on the reserve capacity count and the expended quantity of fluid;

a fluid job requirement circuit, routine or application that determines a fluid amount required to complete a current job based on the expended quantity of fluid and a number of fluid ejection events for the job; and

a reserve comparing circuit, routine or application that compares the fluid reserve capacity and the fluid job requirement.